

In the claims:

1. (currently amended): A method for populating a solid surface of a graft or biomedical device with cells, wherein said method comprises seeding a first population of altered endothelial cells onto said solid surface, wherein said altered endothelial cells exhibit increased by increasing the cell-to-cell cohesion of said cells.
2. (currently amended): The A method of claim 1 for populating a solid surface of a graft or biomedical device with cells, said method comprising reducing the amount of dissociation of cadherin from the cytoskeleton of said cells.
3. (currently amended): The A method of claim 2 wherein dissociation is reduced by reducing or eliminating the phosphorylation of a molecule associated with the adherens junction between the cells.
4. (currently amended): The A method of claim 1 for populating a solid surface of a graft or biomedical device with cells, said method comprising increasing the amount of cadherin per cell.
5. (currently amended): The A method of claim 1 for populating a solid surface of a graft or biomedical device with cells, wherein the cells are human vascular endothelial cells, said method comprising increasing the cell-to-cell cohesion of said endothelial cells.
6. (currently amended): The A method of claim 5 for populating a solid surface of a graft or biomedical device with human vascular endothelial cells, said method comprising reducing the amount of dissociation of cadherin from the cytoskeleton of said human vascular endothelial cells.
7. (currently amended): The A method of claim 6, wherein dissociation is reduced by reducing or eliminating the phosphorylation of a molecule associated with the adherens junction between the human vascular endothelial cells.

8. (currently amended): The method of claim 7, wherein the molecule associated with the adherens junction is β catenin.
9. (currently amended): The method of claim 7, wherein phosphorylation is reduced or eliminated by use of an amount of an agent which is known to modify phosphorylation effective to reduce or eliminate phosphorylation.
10. (currently amended): The A method of claim 5 for populating a solid surface of a graft or biomedical device with human vascular endothelial cells, said process comprising increasing the amount of cadherin per cell.
11. (currently amended): The A method of Claim 10, wherein the amount of cadherin per cell is increased by increasing the number of expressible cadherin genes in the endothelial cells.
12. (currently amended): The A method of Claim 10, wherein the cadherin increased in amount comprises a eukaryotic cadherin polypeptide.
13. (currently amended): The method of Claim 12, wherein the eukaryotic cadherin polypeptide is a mammalian cadherin polypeptide.
14. (currently amended): The A method of Claim 13, wherein the mammalian cadherin polypeptide is a human cadherin polypeptide.
15. (currently amended): The A method of Claim 14, wherein the human cadherin polypeptide is selected from the group consisting of an N-cadherin polypeptide, a P-cadherin polypeptide, an A n E-cadherin polypeptide, and a VE-cadherin polypeptide.
- 16-22. (canceled).

23. (currently amended): A method of increasing cell-to-cell cohesion in human vascular endothelial cells on a graft or biomedical device.

24. (currently amended): The A method of claim 23 comprising increasing the amount of cadherin per cell in ~~native~~ vascular endothelial cells.

25. (currently amended): The A method of Claim 23, wherein the increase in cohesion is achieved by increasing the number of cell surface molecules involved in cell-cell cohesion.

26. (currently amended): The A method of claim 23 comprising reducing the amount of dissociation of cadherin from the cytoskeleton of said human vascular endothelial cells.

27. (currently amended): The A method of Claim 26, wherein the increase in cohesion is achieved by increasing the number of ~~functional~~ molecules bridging cadherins to a cytoskeleton.

28-34. (canceled).

35. (new) The method of claim 1, wherein said graft or biomedical device is in contact with an arterial and/or venous system.

36. (new) The method of claim 1, wherein said solid surface is a surface of a graft.

37. (new) The method of claim 36, wherein said graft is a vascular graft.

38. (new) The method of claim 36, wherein said graft is a tubular graft.